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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/789,124	02/20/2001	Steven K. Case	A48.12-0006	6066

7590 03/20/2002

Judson K. Champlin  
WESTMAN, CHAMPLIN & KELLY, P.A.  
International Centre - Suite 1600  
900 Second Avenue South  
Minneapolis, MN 55402-3319

EXAMINER

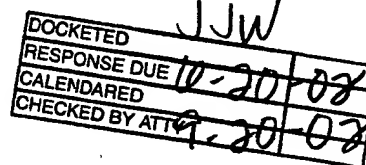
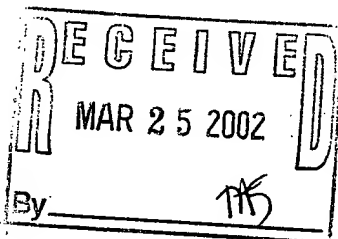
PATEL, TULSIDAS C

ART UNIT	PAPER NUMBER
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2839

DATE MAILED: 03/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.



# Office Action Summary

Application No.

09/789,124

Applicant(s)

CASE ET AL.

Examiner

T. C. Patel

Art Unit

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-71 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-35, 39-64, 68-71 - is/are rejected.
- 7) ☒ Claim(s) 7-9, 36-38 and 65-67 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6, 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *General Status*

1. This is a First Action on the Merits. Claims 1-71, are pending in the case.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-6, 10-35, 39-64 and 68-71, are rejected under 35 U.S.C. § 102(e) as being anticipated by Lee et al. (US 6,118,917).

For claims 1, 30 and 59, Lee et al. in figures 1-4, discloses a substrate 200 having a first and second registration features 220, 230, a first optical module 300 having an optical component 310, a relative reference mount 300 including a registration feature 320, a second optical component 400 with an optical component 310 and relative registration feature, the

registration features on optical components 300 and 400 aligns with the first and second registration features of the substrate.

For claims 2-6, 31-35 and 60-63, optical components are coupled to the substrate using adhesive or metal solder (column 4, lines 64-67 and column 5, lines 1-2). For claims 10-28, 39-58 and 68-71, the adhesive can be activated by radiation. The optical fibers would have characteristic, which changes in one dimension and for other claims, the protrusions and recesses are disclosed. For claim 29 an additional optical module 100 is also disclosed.

***Allowable Subject Matter***

4. Claims 7-9, 36-38 and 65-67 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. C. Patel whose telephone number is (703) 308-1736. The examiner can normally be reached on 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703) 308-3119. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.


Art Unit: 2839

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1736.



T. C. Patel  
Primary Examiner  
Art Unit 2839

tcp  
March 18, 2002

PTO-1449		Atty. Docket No.: A48.12-0006	Appl. No.: 09/789,124
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT 		First Named Inventor:	
		Steven K. Case	
		Filing Date	Group Art:
		February 20, 2001	2874 2839

## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
TD	AA	4,457,467	7/3/84	Klement et al.	228	103
	AB	4,708,429	11/24/87	Clark et al.	350	96.20
	AC	4,798,439	1/17/89	Preston	350	96.20
	AD	4,892,377	1/9/90	Randle	350	96.2
	AE	5,113,404	5/12/92	Gaebe et al.	372	36
	AF	5,210,811	5/11/93	Avelange et al.	385	91
	AG	5,247,597	9/21/93	Blacha et al.	385	88
	AH	5,249,733	10/5/93	Brady et al.	228	180.22
	AI	5,283,446	2/1/94	Tanisawa	257	433
	AJ	5,478,778	12/26/95	Tanisawa	437	183
	AK	5,499,312	3/12/96	Hahn et al.	385	91
	AL	5,550,088	8/27/96	Dautartas et al.	437	225
	AM	5,568,892	10/29/96	Basavanhally	228	180.22
	AN	5,574,561	11/12/96	Boudreau et al.	356	399
	AO	5,603,870	2/18/97	Roll et al.	264	1.25
	AP	5,659,641	8/19/97	DeMeritt et al.	385	14
	AQ	5,700,987	12/23/97	Basavanhally	219	56.1

## FOREIGN PATENT DOCUMENTS

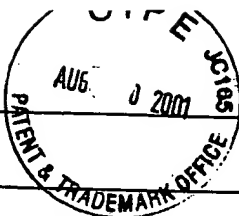
	Document No.	Date	Country	Class	Sub Class	Translation Yes No
	AR					

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AS	
EXAMINER: T.C. Datta	DATE CONSIDERED: 3-18-02

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

PTO-1449

Atty. Docket No.:  
A48.12-0006Appl. No.:  
09/789,124LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION  
DISCLOSURE STATEMENT

First Named Inventor:

Steven K. Case

Filing Date

Group Art:

February 20, 2001

28352874

## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
TDK	AT 5,745,624	4/28/98	Chan et al.	385	91	
	AU 5,748,827	5/5/98	Holl et al.	385	134	
	AV 5,833,202	11/10/98	Wolfgang	248	466	
	AW 5,854,867	12/29/98	Lee et al.	385	49	
	AX 5,892,179	4/6/99	Rinne et al.	174	261	
	AY 5,985,086	11/16/99	Peall	156	292	
	AZ 6,027,253	2/22/00	Ota et al.	385	83	
	BA 6,106,161	8/22/00	Basavanhally et al.	385	88	
	BB 6,155,515	9/5/00	Itoh et al.	285	14	
	BC 6,118,917	9/12/00	Lee et al.	385	49	
	BD 6,132,106	10/17/00	Yokoyama	385	74	
	BE 6,151,173	11/21/00	Massit et al.	359	811	
	BF 6,160,936	12/12/00	You et al.	385	49	
	BG 6,164,837	12/26/00	Haake et al.	385	90	
7	BH					

## FOREIGN PATENT DOCUMENTS

		Document No.	Date	Country	Class	Sub Class	Translation Yes No
TDK	BI	0 977 061 A2	2/2/00	EPO			X
TDK	BJ	63-193113	8/10/88	Japan			

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

TDK	BK	"Micro-Mechanical Alignment Structures (patent pending)", from Web Site of Axsun Technologies, 2 pages, downloaded 2/15/01.					
7	BL	"An Innovative Flexible and Accurate Packaging Technique Suited to Fabricate Low Cost Micro Optoelectronic Modules", by M. Scussat et al., Electronic Components and Technology Conference, 2000, pgs. 26-32.					

EXAMINER:

T.C. Patel

DATE CONSIDERED:

3-18-02

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Atty. Docket No.:  
A48.12-0006Appl. No.:  
09/789,124LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION  
DISCLOSURE STATEMENT

#8

First Named Inventor:

Steven K. Case et al.

Filing Date

Group Art:

February 20, 2001

28392874

## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
th	AA	4,250,520	2/10/81	Denlinger	357	68
	AB	4,720,163	1/19/88	Goodwin et al.	350	96.20
	AC	4,750,799	6/14/88	Kawachi et al.	350	96.11
	AD	4,752,816	6/21/88	Sussman et al.	357	30
	AE	4,954,458	9/4/90	Reid	437	51
	AF	4,989,934	2/5/91	Zavracky et al.	350	96.11
	AG	5,123,074	6/16/92	Yokota et al.	385	95
	AH	5,177,807	1/5/93	Avelange et al.	385	91
	AI	5,216,729	6/1/93	Berger et al.	385	31
	AJ	5,450,508	9/12/95	Decusatis et al.	385	25
	AK	5,535,296	7/9/96	Uchida	385	89
	AL	5,555,333	9/10/96	Kato	385	89
	AM	5,559,914	9/24/96	Asakura	385	49
	AN	5,570,184	10/29/96	Armington et al.	356	375
	AO	5,647,044	7/8/97	Basavanhally et al.	385	92
	AP	5,687,267	11/11/97	Uchida	385	89
9	AQ	5,721,797	2/24/98	Basavanhally et al.	385	49

## FOREIGN PATENT DOCUMENTS

Document No.	Date	Country	Class	Sub Class	Translation Yes No
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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

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EXAMINER:

T.C. Pata

DATE CONSIDERED:

3-18-02

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FORM PTO-1449

Atty. Docket No.:  
A48.12-0006Appl. No.:  
09/789,124LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION  
DISCLOSURE STATEMENT

First Named Inventor:

Steven K. Case et al.

Filing Date

Group Art:

February 20, 2001

2534-2874

## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
TRG	AT 5,748,822	5/5/98	Miura et al.	385	90	
	AU 5,778,120	7/7/98	Asakura et al.	385	49	
	AV 5,859,943	1/12/99	Asakura et al.	385	49	
	AW 5,883,988	3/16/99	Yamamoto et al.	385	14	
	AX 5,898,806	4/27/99	Nishimoto	385	49	
	AY 5,907,649	5/25/99	Acklin et al.	385	49	
	AZ 5,916,458	6/29/99	Komoriya et al.	219	121.63	
	BA 5,966,486	10/12/99	Boudreau et al.	385	90	
	BB 5,970,200	10/19/99	Takikawa et al.	385	137	
	BC 5,985,086	11/16/99	Peall	156	292	
	BD 6,027,254	2/22/00	Yamada et al.	385	88	
	BE 6,058,234	5/2/00	Tachigori	385	49	
	BF 6,112,001	8/29/00	Kishida et al.	385	49	
	BG 6,115,515	9/5/00	Itoh et al.	385	14	
	BH 6,130,448	10/10/00	Bauer et al.	257	222	
	BI 6,157,050	12/5/00	Fukuoka	257	82	
	BJ					

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
TRG	BK 0 840 154 A1	5/6/98	EPO	-	-	X

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

BL	
EXAMINER: T. C. Patel	DATE CONSIDERED: 3-18-02

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First Named Inventor:

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February 20, 2001

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## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
BM						
BN						

## FOREIGN PATENT DOCUMENTS

		Document No.	Date	Country	Class	Sub Class	Translation Yes No
TH	BO	2 779 536	12/10/99	France	5	-	X
	BP	54-12286	1/29/79	Japan	-	-	X
	BQ	61-277908	12/8/96	Japan	-	-	(Abstract)
	BR	62-276890	12/1/87	Japan	-	-	(Abstract)
	BS	63-12187	1/19/88	Japan	-	-	(Abstract)
	BT	63-65411	3/24/88	Japan	-	-	(Abstract)
	BU	63-193113	8/10/88	Japan	-	-	(Abstract)
	BV	63-228113	9/22/88	Japan	-	-	(Abstract)
	BW	1-302214	12/6/89	Japan	-	-	(Abstract)
	BX	6-34852	2/10/94	Japan	-	-	(Abstract)
	BY	6-174943	6/24/94	Japan	-	-	(Abstract)
	BZ	6-201921	7/22/94	Japan	-	-	(Abstract)
	CA	6-331840	12/2/94	Japan	-	-	(Abstract)
9	CB	7-333472	12/22/95	Japan	-	-	(Abstract)

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

CC

EXAMINER:

T. C. Patel

DATE CONSIDERED:

3-8-02

AMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 9; draw line through citation if not in conformance and not considered. Include copy of this communication to applicant.

FORM PTO-1449

Atty. Docket No.:  
A48.12-0006Appl. No.:  
09/789,124LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION  
DISCLOSURE STATEMENT

First Named Inventor:

Steven K. Case et al.

Filing Date

Group Art:

February 20, 2001

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## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
CD						
CE						
CF						
CG						
CH						
CI						

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
CJ	196 44 758 A1	4/30/98	Germany			X

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

CK	Article from Web Site entitled "The Photonics Program and the Engineering Research Division at LLNL are Automating the Packaging of Optoelectronic Devices to Lower Costs", 3 pages, downloaded 10/19/00.
CL	Article from Web Site entitled "Automated Optoelectronic Packaging", 2 pages, downloaded 2/5/01.
CM	Article from Web Site entitled "Micro Assembly Automation", 3 pages., downloaded 2/5/01.
CN	

EXAMINER: T. C. Patel

DATE CONSIDERED: 3-18-02

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449	Atty. Docket No.: A48.12-0006	Appl. No.: 09/789,124
<p>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</p> <p><i># 4</i></p>	First Named Inventor:	
	Steven K. Case et al.	
	Filing Date	Group Art:
	February 20, 2001	2839-2874



## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
TRW	CO	4,730,198	3/8/88	Brown et al.	350	96.20
	CP	4,790,618	12/13/88	Abe	350	96.15
	CQ	4,817,849	4/4/89	Yamamoto et al.	228	103
	CR	4,845,052	7/4/89	Abend	437	209
	CS	4,909,590	3/20/90	Kamiko et al.	350	96.22
	CT	5,093,879	3/3/92	Bregman et al.	385	93
	CU	5,170,455	12/8/92	Gooseen et al.	385	89
	CV	5,215,489	6/1/93	Nakamura	445	4
	CW	5,322,463	6/21/94	Young	445	4
	CX	5,371,822	12/6/94	Horwitz et al.	385	89
	CY	5,625,733	4/29/97	Frigo et al.	385	88
	CZ	5,659,641	8/19/97	DeMeritt et al.	385	14
	DA	5,737,467	4/7/98	Kato et al.	385	92
	DB	5,916,458	6/29/99	Komoriya et al.	219	121.63
	DC	6,010,251	1/4/00	Koyanagi et al.	385	93
	DD					

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
DE						

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

DF	
EXAMINER: T. C. Patel	DATE CONSIDERED: 3-18-02

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